

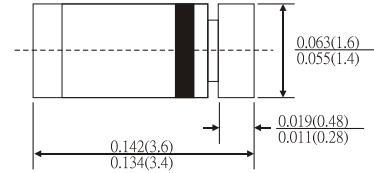
# LL103A THUR LL103C

## SMALL SIGNAL SCHOTTKY DIODES

### FEATURES

- For general purpose applications
- The LL103 series is a Metal-on-silicon junction Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing, and coupling diodes for fast switching and low logic level applications. Other applications are click suppressions, efficient full wave bridges in telephone subsets, and blocking diodes in rechargeable low voltage battery systems.
- These diodes are also available in the DO-35 case with the type designation SD103A to SD103C ,in the SOD-123 case with the type designation SD103AW to SD103CW and in the SOD-323 case with typedesignation SD103AWS to SW103CWS,in the Micro-MELF case type with the type designation MCL103A to MCL103C

### Mini-MELF



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- Case : Mini-MELF glass case(SOD-80 )
- Weight : Approx. 0.05 gram

### ABSOLUTE RATINGS(LIMITING VALUES)

	<i>Symbol</i>	<i>Value</i>	<i>Units</i>
Peak Reverse Voltage	LL103A LL103B LL103C	V <sub>RRM</sub> 30 V <sub>RRM</sub> 20	V
Power Dissipation (infinite Heat Sink)	P <sub>tot</sub>	400 <sup>1)</sup>	mW
Maximum Single cycle surge 60Hz sine wave	I <sub>FSM</sub>	15	A
Junction temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

1) Valid provided that electrodes are kept at ambient temperature

### ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

	<i>Symbol</i>	<i>Min.</i>	<i>Typ.</i>	<i>Max.</i>	<i>Units</i>
Leakage current at V <sub>R</sub> =30V V <sub>R</sub> =20V V <sub>R</sub> =10V	LL103A LL103B LL103C	I <sub>R</sub> I <sub>R</sub> I <sub>R</sub>		5 5 5	μA μA μA
Forward voltage drop at I <sub>F</sub> =20mA I <sub>F</sub> =200mA	V <sub>F</sub> V <sub>F</sub>			0.37 0.6	V V
Junction Capacitance at V <sub>R</sub> =0V, f=1 MHz	C <sub>J</sub>		50		pF
Reverse Recovery time at I <sub>F</sub> =I <sub>R</sub> =50mA, recover to 200mA recover to 0.1 I <sub>R</sub>	t <sub>rr</sub>		10		ns

Figure 1. Typical variation of forward current vs. Forward Voltage for primary conduction through the schottky barrier

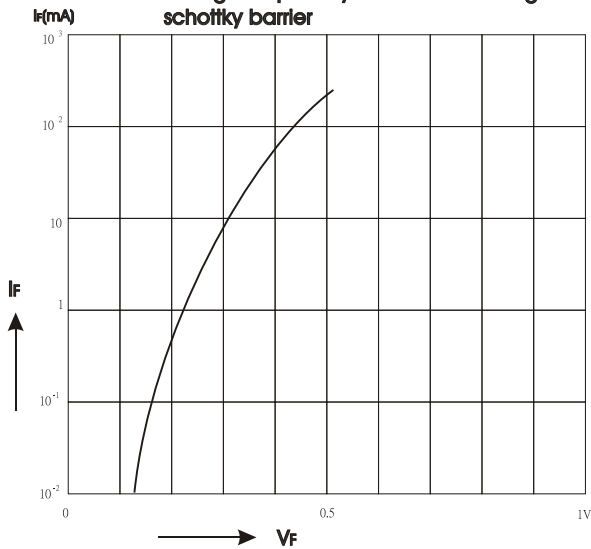


Figure 2. Typical high current forward conduction curve  $t_p=300\text{ms}$ , duty cycle=2%

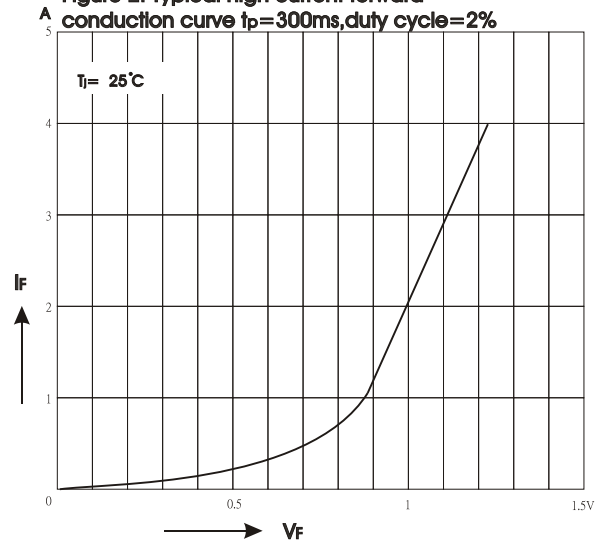


Figure 3. Typical non repetitive forward surge current versus pulse width

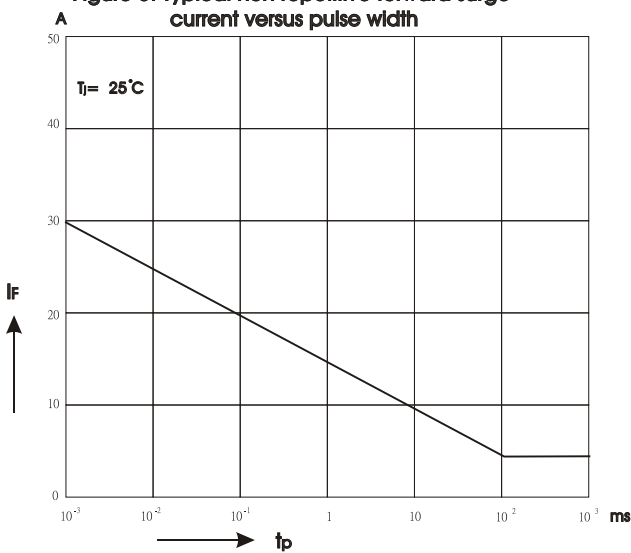


Figure 4. Typical variation of reverse current at various temperatures

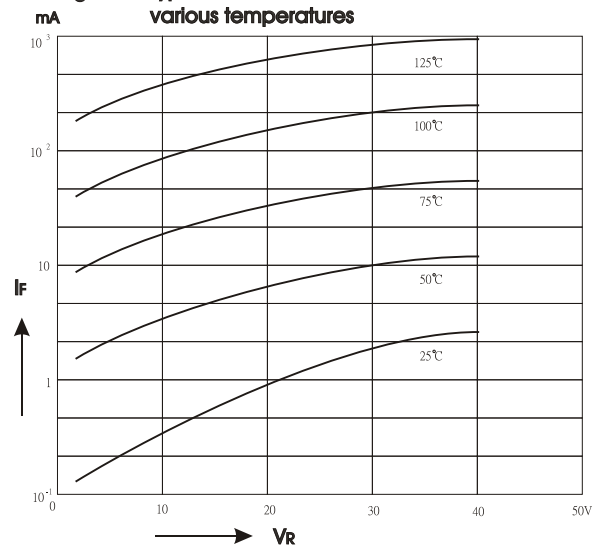


Figure 5. Blocking deration versus temperature at various average forward currents

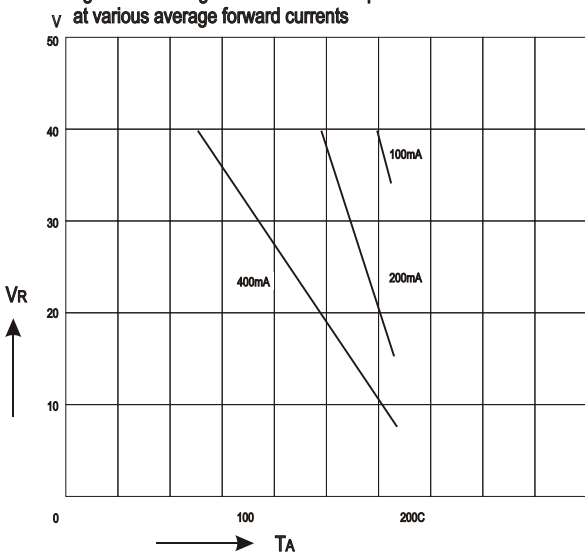


Figure 6. Typical capacitance versus reverse voltage

